

**Oklahoma
Career and Technical Education Matrix for Mathematics**

The “✓” designations in the program columns under each career pathway identify significant opportunities for academic standards-related instruction within the various career-technical programs. The absence of a “✓” should not, however, be interpreted as offering no opportunity for interdisciplinary instruction. Teachers should make decisions based on their own instructional goals, assessment priorities, best judgments, and student interests.

Oklahoma Mathematics Priority Academic Student Skills Process Standards/Objectives Algebra I	EO I Test	Agriculture, Food & Natural Resources							Architecture & Construction			Arts, A/V Technology & Communications					
		Food Products & Processing Systems	Agribusiness Systems	Power, Structural & Technical Systems	Environmental Service Systems	Plant Systems	Natural Resource Systems	Animal Systems	Design/ Pre-Construction	Construction	Maintenance/ Operations	Performing Arts	Visual Arts	Printing Technology	Journalism & Broadcasting	A/V Technology & Film	Telecommunications
Standard 1: Number Sense and Algebraic Operations - The student will use expressions and equations to model number relationships.																	
1. Equations and Formulas a. Translate word phrases and sentences into expressions and equations and vice versa. b. Solve literal equations involving several variables for one variable in terms of the others. c. Use the formulas from measurable attributes of geometric models (perimeter, circumference, area and volume), science, and statistics to solve problems within an algebraic context. d. Solve two-step and three-step problems using concepts such as rules of exponents, rate, distance, ratio and proportion, and percent.	H	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2. Expressions a. Simplify and evaluate linear, absolute value, rational and radical expressions.	H	✓	✓		✓		✓		✓	✓	✓					✓	✓

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<i>(continued from the previous page)</i> b. Simplify polynomials by adding, subtracting or multiplying. c. Factor polynomial expressions.																	
Standard 2: Relations and Functions - The student will use relations and functions to model number relationships.																	
1. Relations and Functions a. Distinguish between linear and nonlinear data. b. Distinguish between relations and functions. c. Identify dependent and independent variables, domain and range. d. Evaluate a function using tables, equations or graphs.	H	✓	✓		✓				✓	✓	✓					✓	✓
2. Linear Equations and Graphs a. Solve linear equations by graphing or using properties of equality. b. Recognize the parent graph of the functions $y = k$, $y = x$, $y = x $, and predict the effects of transformations on the parent graph. c. Slope I. Calculate the slope of a line using a graph, an equation, two points or a set of data points. II. Use the slope to differentiate between lines that are parallel, perpendicular, horizontal, or vertical.	H	✓	✓		✓				✓							✓	✓